

brain. In contrast to the situation with Parkinson's disease, in which administration of L-dopa seemed to work by increasing dopamine in the brain, the antipsychotic drugs such as thiorazine, which are used to treat schizophrenia, seemed to work by blocking the action of dopamine in the brain. To this very day, medications that block the effects of dopamine remain the mainstay of treatment for schizophrenia. Dr. Carlsson's work was instrumental in establishing the biological foundation of mental illness, which has led to our ability to target treatment of such disorders with medications based on their specific biochemical cause.

Dr. Greengard carried this line of work one step further, examining exactly how such neurotransmitters work as they transfer nerve impulses from one nerve cell to another through the connecting region called the synapse. He described in detail the cascade of chemical reactions that occurs as the neurotransmitter chemicals stimulate the next nerve cell in the nerve pathway, which results in conversion of the nerve impulse back into an electrical signal. Particularly important was the discovery of the different speeds at which these nerve signals are transmitted across the synapse. This framework enabled him to establish, on a molecular and biochemical level, the mechanism of action of various drugs that act on the central nervous system.

Finally, Dr. Kandel expanded the context of this research area by showing how such complex processes as memory and learning are directly related to the basic biochemical foundations outlined by Drs. Greengard, Carlsson, and Axelrod. In detailed studies in animals, Dr. Kandel showed that the process of memory was associated with specific changes in the shape and functioning of the synapse region that connects pairs of nerve cells. This research revealed that these connections between nerve cells, rather than being just passive junctions, are actually vitally important in the complicated processes of the nervous system.

The brain could be said to be the ultimate human frontier. As scientists pieced together the function of all the other organs in the body over the last few centuries, the brain remained an enigma. The work of Drs. Axelrod, Carlsson, Greengard, and Kandel starts to clear away some of the mystery that surrounds the brain, and this research has already led to practical, clinical advances to help millions of people with neurological and mental disorders such as Parkinson's disease and schizophrenia. This basic understanding of how the brain works is clearly necessary for understanding of the numerous brain disorders that affect many more millions of people worldwide, some of which are just starting to be elucidated. Moreover, these pioneering studies have opened the door to the development of targeted medications to treat such illnesses. I am particularly excited about the possibility that this

research will unlock the key to the medical treatment of substance abuse disorders, whose social impact in our country is enormous. On behalf of the many people who stand to live longer and more fulfilling lives as a result of their discoveries, I extend my deepest congratulations to these esteemed Nobel laureates.

#### LOCAL LAW ENFORCEMENT ACT OF 2001

Mr. SMITH of Oregon. Mr. President, I rise today to speak about hate crimes legislation I introduced with Senator KENNEDY in March of this year. The Local Law Enforcement Act of 2001 would add new categories to current hate crimes legislation sending a signal that violence of any kind is unacceptable in our society.

I would like to describe a terrible crime that occurred June 2, 1999 in Greenfield, MA. Jonathan Shapiro, 18, and Matthew Rogers, 20, used a pocket-knife to cut an anti-gay slur into the back of a high school classmate.

Government's first duty is to defend its citizens, to defend them against the harms that come out of hate. The Local Law Enforcement Enhancement Act of 2001 is now a symbol that can become substance. I believe that by passing this legislation, we can change hearts and minds as well.

#### UNITED NATIONS CONFERENCE ON THE ILLICIT TRADE IN SMALL ARMS AND LIGHT WEAPONS IN ALL ITS ASPECTS

Mrs. FEINSTEIN. Mr. President, today in New York the United Nations convened the conference on the Illicit Trade in Small Arms and Light Weapons in All its Aspects, the first effort by the U.N. to address the pressing issue of small arms trafficking.

The mass proliferation of small arms—shoulder-mounted missiles, assault weapons, grenade launchers, high-powered sniper rifles and other tools of death—is fueling civil wars, terrorism and the international drug trade throughout the world.

The grimmest figures come from developing countries where light, cheap and easy to use small arms and light weapons, such as AK-47s and similar military assault rifles, have become the weapons of choice of narco-traffickers, terrorists and insurgents.

The problem is staggering: An estimated 500 million illicit small arms and light weapons are in circulation around the globe, and in the past decade four million people have been killed by them in civil war and bloody fighting.

Nine out of 10 of these deaths are attributed to small arms and light weapons. According to the International Committee of the Red Cross, more than 50 percent of those killed are believed to be civilians.

Starting today, the United Nations will host a conference on the Illicit

Trade in Small Arms and Light Weapons in All its Aspects. At this conference, the U.N., for the first time, will seek to devise international standards and procedures for curtailing small arms trafficking. It is an issue of extreme importance to the United States. Not only because of the violence and devastation itself, but because of the threat these weapons pose to our political, economic and security interests.

The volume of weaponry has fueled cycles of violence and been a major factor in the devastation witnessed in recent conflicts in Africa, the Balkans, and South Asia, among other places. These conflicts undermine regional stability and endanger the spread of democracy and free-markets around the world. Here are a few examples.

In Mexico a lethal flow of guns south from the United States has fed that nation's drug war. Hundreds of thousands of weapons over the last decade have flooded into Mexico from the United States. Authorities recently traced a sale of 80 Chinese assault weapons from a San Diego gunshop to a Tijuana weapons dealer for \$27,000. Many of these ended up in the hands of the Arellano Felix drug cartel and are believed responsible for at least 21 deaths, including two infants, six children and a pregnant 17-year-old girl shot and killed during a mass murder at Rancho el Rodeo in September 1998.

In Albania more than 650,000 weapons and 20,000 tons of explosives disappeared from government depots in the three years leading up to the outbreak of violence in the Balkans, according to the U.N. The continued presence of the weapons poses a very real threat to NATO and U.S. peacekeepers in the region.

And in Colombia, the continued instability is in part due to the torrential flow of rifles and pistols to rebel groups and drug gangs who have used the imported weapons to murder judges, journalists, police officers, as well as innocent passers-by.

The increased access by terrorists, guerrilla groups, criminals, and others to small arms and light weapons puts in jeopardy U.S. law enforcement efforts, business people based or traveling overseas, and even U.S. tourists.

In approaching the United Nations Conference, it is critical that the U.S. government negotiate and support making the trafficking of small arms traceable and eliminate the secrecy that permits thousands of weapons to fuel crime and war without anyone's knowledge of their source.

It is my hope the United Nations will move to create international procedures to control the proliferation of small arms and light weapons. The United States has some of the strongest arms export controls in the world, and it is in the U.S. interest to see that those standards are equaled by the world community.